

Claims

- [c1] A baggage screening system, comprising:
 - a plurality of screening subsystems, each comprising an automated baggage screen device and a feed conveyor for feeding bags to said screen device; and
 - a supply conveyor for supplying bags to said screening subsystems, said supply conveyor supplying bags only to a screening subsystem that has no more than a particular number of unscreened bags that are at that screening subsystem.
- [c2] The system of claim 1 wherein said supply conveyor includes a recirculation line for recirculating bags to an upstream portion of said supply conveyor that have not been supplied to a screening subsystem.
- [c3] The system of claim 1 wherein bags are transported through said screen device at a first speed and said supply conveyor operates at a second speed that is greater than said first speed and wherein said feed conveyor includes a deceleration conveyor.
- [c4] The system of claim 3 wherein said deceleration conveyor receives a bag at said second speed and deceler-

ates said bag to said first speed.

- [c5] The system of claim 1 including a diverter at each of said screening subsystems for selectively diverting a bag to that screening subsystem, said diverter controlling orientation of a bag being diverted.
- [c6] The system of claim 5 wherein said diverter is a powered-face diverter.
- [c7] The system of claim 1 including a sortation conveyor network downstream of said screen device for sorting bags as a function of the screening of the bags.
- [c8] The system of claim 7 wherein said sortation conveyor network directs bags that are not cleared by said screen device to a secondary bag screening function.
- [c9] The system of claim 8 wherein said sortation conveyor network directs bags that are not cleared by said screen device to a manual inspection station.
- [c10] The system of claim 8 wherein said sortation conveyor network includes a buffer for buffering bags at said secondary screening function.
- [c11] The system of claim 8 wherein said secondary bag screening function uses images of bags captured by said screen device.

- [c12] The system of claim 1 wherein bags are not queued at said feed conveyor.
- [c13] The system of claim 1 wherein bags travel substantially only at non-zero speeds through said supply conveyor and said feed conveyor.
- [c14] A screening module for a baggage screening system having an automated baggage screen device, a supply conveyor for supplying bags to said screening module from a supply conveyor, said screening module comprising:
 - a feed conveyor for feeding bags to the screen device and a sortation conveyor network downstream of said screen device;
 - said feed conveyor comprising a deceleration conveyor for decreasing speeds of individual bags being supplied to said bag screen device; and
 - said sortation conveyor network sorting bags as a function of the screening of the bags.
- [c15] The module of claim 14 wherein said sortation conveyor network directs bags that are not cleared by said screen device to a secondary bag screening function.
- [c16] The module of claim 15 wherein said sortation conveyor network directs bags that are not cleared by said screen

device to a manual inspection station.

- [c17] The module of claim 14 wherein said sortation conveyor network includes a buffer for buffering bags at said secondary screening function.
- [c18] The module of claim 17 wherein said secondary bag screening function uses images of bags captured by said screen device.
- [c19] The module of claim 14 wherein bags are not queued at said feed conveyor.
- [c20] The module of claim 14 wherein bags travel substantially only at non-zero speeds through said feed conveyor.
- [c21] The module of claim 14 wherein said screen device is mounted substantially above floor level.
- [c22] A method of screening bags, comprising:
 - providing a plurality of automated baggage screen devices and a conveyor system; and
 - supplying bags individually to said screening devices with said conveyor system in a manner that bags travel substantially only at non-zero speeds to said screening devices.
- [c23] The method of claim 22 including supplying bags only to screening devices that have at least partially screened

each of the bags that have been supplied to that screening device.

- [c24] The method of claim 22 wherein said conveyor system includes feed conveyors, each for feeding bags to one of said screen devices and a supply conveyor for supplying bags to said feed conveyors .
- [c25] The method of claim 24 including recirculating bags to an upstream portion of said supply conveyor that have not been supplied to a feed conveyor.
- [c26] The method of claim 24 including transporting bags through said screen device at a first speed and at said supply conveyor at a second speed that is greater than said first speed, including providing a deceleration conveyor at said feed conveyor.
- [c27] The method of claim 26 including receiving a bag with said deceleration conveyor at said second speed and decelerating said bag to said first speed.
- [c28] The method of claim 21 including providing a diverter for each of said screen devices and selectively diverting a bag to a screen device with the corresponding diverter including controlling orientation of a bag being diverted.
- [c29] The method of claim 28 wherein said diverter is a pow-

ered-face diverter.

- [c30] The method of claim 22 including sorting bags as a function of the screening of the bags.
- [c31] The method of claim 30 wherein said sorting includes directing bags that are not cleared by said screen device to a secondary bag screening function.
- [c32] The method of claim 31 wherein said sorting includes directing bags that are not cleared by said screen device to a manual inspection station.
- [c33] The method of claim 31 including buffering bags at said secondary screening function.
- [c34] The method of claim 31 wherein said secondary bag screening function uses images of bags captured by said screen device.
- [c35] The method of claim 24 including not queuing bags at said feed conveyor.